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Amendment and Response

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Serial No.: 10/728,577

Confirmation No.: 8901

Filed: 5 December 2003

For: POLYMER COMPOSITIONS WITH BIOACTIVE AGENT, MEDICAL ARTICLES, AND METHODSAmendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the above-identified application:

1. (Currently Amended) A polymer composition preparable by a method comprising combining components comprising:

an organic polymer matrix;

an inverse emulsion comprising absorbent hydrophilic microparticles, wherein the microparticles when in a substantially nonhydrated form have an average particle size of 10 microns or less, and wherein the microparticles comprise an amine-containing organic polymer selected from the group consisting of a poly(quaternary amine), a polylactam, a polyamide, and combinations thereof;

a bioactive agent selected from the group consisting of a silver compound, a copper compound, a zinc compound, and combinations thereof, wherein the silver compound has a solubility in water of at least 0.1 gram per liter [[in water]]; and

an optional foaming agent;

wherein the components are combined in a manner to produce a polymer [[composition]] mixture comprising the organic polymer matrix and the microparticles comprising an amine-containing organic polymer, wherein at least a portion of the bioactive agent is incorporated within the microparticles.

2. (Original) The polymer composition of claim 1 wherein the microparticles have an average particle size of 1 micron or less when in a substantially nonhydrated form.

3. (Original) The polymer composition of claim 2 wherein the microparticles have an average particle size of 0.5 micron or more when in a substantially nonhydrated form.

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4. (Original) The polymer composition of claim 1 further comprising secondary absorbent particles having an average particle size of greater than 10 microns when in a substantially nonhydrated form.
5. (Original) The polymer composition of claim 4 wherein the secondary absorbent particles having an average particle size of greater than 10 microns are superabsorbent.
6. (Original) The polymer composition of claim 1 wherein the microparticles are superabsorbent.
7. (Original) The polymer composition of claim 1 wherein the organic polymer matrix comprises an elastomeric polymer.
8. (Original) The polymer composition of claim 7 wherein the elastomeric polymer is selected from the group consisting of a polyisoprene, a styrene-diene block copolymer, a natural rubber, a polyurethane, a polyether-block-amide, a poly-alpha-olefin, a (C1-C20)acrylic ester of meth(acrylic) acid, an ethylene-octene copolymer, and combinations thereof.
9. (Original) The polymer composition of claim 1 wherein the organic polymer matrix comprises a thermoplastic polymer.
10. (Original) The polymer composition of claim 9 wherein the thermoplastic polymer is a polyolefin.
11. (Original) The polymer composition of claim 1 wherein the organic polymer matrix comprises a hydrophilic polymer.

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12. (Original) The polymer composition of claim 11 wherein the hydrophilic polymer is selected from the group consisting of a polysaccharide, a polyether, a polyurethane, a polyacrylate, a polyester, and combinations thereof.
13. (Original) The polymer composition of claim 1 wherein the amine-containing organic polymer microparticles comprises a quaternary ammonium salt of an organic polymer.
14. (Original) The polymer composition of claim 13 wherein the microparticles comprise a cationic homopolymer of the methyl chloride quaternary salt of 2-(dimethylamino)ethyl methacrylate.
15. (Original) The polymer composition of claim 1 further comprising an additive selected from the group consisting of a plasticizer, a tackifier, a crosslinking agent, a stabilizer, an extruding aid, a filler, a pigment, a dye, a swelling agent, a foaming agent, a chain transfer agent, and combinations thereof.
16. (Original) The polymer composition of claim 15 wherein the additive is a filler comprising fibers.
17. (Original) The polymer composition of claim 1 wherein the organic polymer matrix comprises a mixture of two or more polymers.
18. (Original) The polymer composition of claim 1 wherein the microparticles are present in an amount of 1 wt-% to 60 wt-%, based on the total weight of the polymer composition.
19. (Original) The polymer composition of claim 1 wherein the composition includes water in an amount of 5 wt-% to 10 wt-%, based on the total weight of the polymer composition.

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20. (Original) The polymer composition of claim 1 in the form of an extruded film.
21. (Original) The polymer composition of claim 1 in the form of a foam.
22. (Original) The polymer composition of claim 1 further comprising a foaming agent.
23. (Original) The polymer composition of claim 22 wherein the foaming agent is a physical foaming agent.
24. (Original) The polymer composition of claim 23 wherein the physical foaming agent comprises thermally expandable microspheres.
25. (Original) The polymer composition of claim 24 wherein the composition is stable.
26. (Original) The polymer composition of claim 1 wherein the method further comprises combining the components in the presence of water and removing a substantial portion of the water.
- 27-53. (Cancelled)
54. (Original) A medical article comprising the polymer composition of claim 1.
55. (Original) The medical article of claim 54 which is a wound dressing or a wound packing material.
- 56-59. (Cancelled)

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60. (Original) A method of using a polymer composition comprising applying the polymer composition of claim 1 to a wound.

61-70. (Cancelled)

71. (Original) A wound dressing comprising an apertured, liquid permeable substrate and the composition of claim 1 wherein the composition is nonadherent.

72-73. (Cancelled)

74. (New) A polymer composition preparable by a method comprising combining components comprising:

an organic polymer matrix;

an inverse emulsion comprising absorbent hydrophilic microparticles, wherein the microparticles when in a substantially nonhydrated form have an average particle size of 10 microns or less, and wherein the microparticles comprise a poly(quaternary amine)-containing organic polymer;

a bioactive agent selected from the group consisting of a silver compound, a copper compound, a zinc compound, and combinations thereof, wherein the silver compound has a solubility in water of at least 0.1 gram per liter; and

an optional foaming agent;

wherein the components are combined in a manner to produce a polymer mixture comprising the organic polymer matrix and the microparticles comprising a poly(quaternary amine)-containing organic polymer, wherein at least a portion of the bioactive agent is incorporated within the microparticles.

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75. (New) The polymer composition of claim 1 wherein the bioactive agent is present in an amount of no more than 3 weight percent based on the total weight of the amine-containing polymer.

76. (New) The polymer composition of claim 74 wherein the bioactive agent is present in an amount of no more than 3 weight percent based on the total weight of the poly(quaternary amine)-containing polymer.